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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,242	12/19/2000	Jon C. Taenzer	022577-404	4466

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EXAMINER

BARNIE, REXFORD N

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/739,242

Applicant(s)

TAENZER ET AL.

Examiner

REXFORD N. BARNIE

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 101-138 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 101-138 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Rexford N. Barnie
REXFORD BARNIE
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/19/00
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 101-106 and 108-116 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mack, II et al. (US Pat# 5,991,637) in view of Anderson (US Pat# 5,721,783) or Kerns (WO 98/44761)

Regarding claims 101 and 112, Mack, III teaches a audio system in (see figs. 4-5 and 1) comprising of a headphone and a cellular telephone interconnected. The audio system comprises a microphone (210), a speaker (202), a signal detector (502) and an automatic or manual switching mechanism (see col. 3 lines 50-60, 512, 508 @fig. 6) wherein according to (see cols. 6-7), in response to an incoming call or going off-hook, audio signals can be sent to the headphone speakers and in response, to going off-hook being able to use a microphone associated with the headphone for a call.

Mack fails to teach a hearing aid connected to a cellular phone, which would functions in a hearing aid.

Kerns teaches a hearing aid apparatus which comprises a hearing aid coupled to a telephone which can function in a telephone mode or in a hearing mode, the latter coupling a microphone to the speaker vi a signal processor and eventually to a speaker of the hearing aid (see figs.)

Anderson teaches a hearing aid apparatus which can be coupled to a telephone wherein the hearing aid apparatus can function either in a hearing aid mode that is coupling a microphone to the speaker via signal processor including means (24, 26, 27) and in a second mode, telephone mode (see fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mack and apply it to any audio means interconnected to a telephone by providing the ability to detect an incoming call or a user going off-hook and automatically coupling or switching to the telephone thus saving a user the need of having to do so manually and in absence of telephone usage, being able to use the audio means with its intended purpose.

Regarding claim 102, The combination teaches being able to couple a microphone and speaker to a remote device in a telephone mode such as taught by Mack.

Regarding claim 103, 104 and 113, The combination teaches being able to receive an incoming call and it's notoriously well known in the art to alert a user to an incoming call by a ring signal. The combination including Mack teaches receiving a ring signal in (see col. 7 lines 64-67). The combination teaches detection of an outgoing call in (see cols. 6-7 of Mack).

Regarding claims 105 and 115, The combination teaches being able to use a hearing aid as a default mode in light of the secondary references applied.

Regarding claim 106, The combination including Mack teaches the ability to either use manual or automatic switching in response to an incoming communication

Art Unit: 2643

and according to See Anderson, the ability to use manual switching as means of receiving an incoming call is known by using an open or closed mode to operate functionally in either a hearing aid mode or a telephone mode.

Regarding claims 108-111, The combination including Mack teaches being able to communicate with a microphone other than that of the telephone when in a telephone mode and so does Anderson in (see col. 6 of Anderson). The combination including Anderson teaches being able to control the hearing aid parameters by using control parameters to suit a user's needs.

Regarding claims 114 and 116, The combination including Mack teaches being able to make an outgoing call and being able to use an automatic or manual switch as a coupling means to remotely located device.

Claims 105 and 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mack, II et al. (US Pat# 5,991,637) in view of Anderson (US Pat# 5,721,783) or Kerns (WO 98/44761) and further in view of Taenzer et al. (US Pat# 5,751,820)

Regarding claims 105 and 107, The combination fails to teach conserving power. Taenzer teaches a hearing aid device wherein a hearing aid device can conserve power by using an automatic means and a wake up mode in response to a normal use in (see cols. 9-10, col. 11 line 66-col. 12 line 5). Furthermore, according to Taenzer, a hearing aid device can be placed in a sleep or awake state based on status of the hearing aid.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Taenzer into that of the combination thus making it possible to save power in (see col. 10 of Tenzer).

Claims 101, 112, 113, 114, 116, 118, 125 and 128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerns (WO 98/44761) in view of Mack et al. (US Pat# 5,991,637) or Miyama (JP 10-290274).

Regarding claims 101 and 112, Kerns teaches a hearing aid apparatus connected to a remote device (auxilliary device) such as telephone comprising of a microphone, sound processor, a speaker and a switching means embedded in an interface connected the remote device to the hearing aid in (see figs. 2 and fig. 3 illustrating interface 219 of fig. 1). Kerns teaches receiving and detecting an incoming call in (see page 6 lines 24-page 7).

For the sake of argument, Kerns fails to teach automatic switching and detection of an incoming and outgoing communication wherein a single microphone and speaker can be used for both a telephone and hearing aid mode.

Mack teaches a communication system wherein an automatic or manual switching can be enabled in response to an incoming or outgoing call by using a controller means which senses such conditions and also, being able to activate the same microphone and speaker of the headphone without having to use that of the telephone in (see figs 4-6, col. 3, cols. 6-7).

Miyama teaches a communication system with the same inventive concept which is being able to receive an incoming and outgoing communication and automatically switching from mode to another and for instance activating a speaker and microphone associated with the hearing aid in a hearing aid mode in (see figs., abstract and disclosure). Furthermore, according to Miyama, signal processing can be performed by using a sound adjustment means.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of either Mack or Miyama into that of Kerns thus making it possible to provide a communication system capable of having a multi-purpose functions by adapting to one mode or the other automatically without too much user's input, provide bi-directional communication and provide integration of communication devices.

Regarding claims 113-114 and 116, the combination including Mack or Miyama teaches detection of an incoming call, outgoing call, a ring signal, providing a first state and a second state, a manual or automatic switch.

Regarding claim 118, The combination teaches coupling a microphone of a hearing aid including a headphone to a telephone line

Regarding claim 125, the combination for instance including Miyama teaches being able to apply manual switching from mode to the other.

Regarding claim 128, the combination teaches a hearing aid mode such as taught by Kerns.

Art Unit: 2643

Claims 115, 117, 126 and 127 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerns (WO 98/44761) in view of Mack et al. (US Pat# 5,991,637) or Miyama (JP 10-290274) and Taenzer et al.

Regarding claims 115, 117, 126 and 127, The combination teaches putting a hearing aid apparatus in a hearing mode after end of a telephone call but fails to teach a sleep mode for power conservation purposes.

Taenzer teaches a hearing aid device wherein a hearing aid device can conserve power by using an automatic means and a wake up mode in response to a normal use in (see cols. 9-10, col. 11 line 66-col. 12 line 5). Furthermore, according to Taenzer, a hearing aid device can be placed in a sleep or awake state based on status of the hearing aid.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Taenzer into that of the combination thus making it possible to save power in (see col. 10 of Taenzer).

Claims 115, 117, 126 and 127 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerns (WO 98/44761) in view of Mack et al. (US Pat# 5,991,637) or Miyama (JP 10-290274) and Hou (US Pat# 6,711,271).

Regarding claims 115, 117, 126 and 127, The combination fails to teach a sleep mode via switching.

Hou teaches a power management for hearing aid device in (see figs. and disclosure) wherein a hearing aid device can be placed in a sleep mode as means of conserving power.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hou into that of the combination thus making it possible to conserve power when the hearing device is not being used

Claims 119-122 and 124 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerns (WO 98/44761) in view of Mack et al. (US Pat# 5,991,637) or Miyama (JP 10-290274) and Mansgold et al. (US Pat# 4,425,481).

Regarding claims 119-122, 124, The combination teaches signal processing but Mangold teaches a hearing aid which can process signals based on environment and also based on hearing deficiency of a user in (see figs. and disclosure).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mansgold into that of the combination thus making it possible to adjust hearing loss based on suitable parameters associated with a user and in part by considering conditional factors.

Regarding claim 123, The combination teaches the ability to communicate using a speaker other than a telephone speaker.

Claims 101-104, 106, 109, 112-114, 116, 118-121, 123, 128-132, 134, 135 and 138 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US Pat# 5,721,783) in view of Mack et al. (US Pat# 5,991,637) or Miyama (JP 10-290274).

Regarding claims 101 and 112, Anderson teaches a hearing aid device including a microphone, a sound processor (24, 26, 27), a speaker (20), and switching means (DPDT) coupled to a remotely located device (cordless, telephone handset or cell phone) wherein in a hearing aid mode, the microphone signal is coupled to the speaker after signal processing and in a telephone mode, the microphone and speaker can be used for communication thus deactivating that of the phone according to (see col. 6).

Anderson fails to teach an automatic switching via detection of an incoming or outgoing signal by means of a detector.

Mack et al. teaches a communication system which can detect an incoming call or the making of an outgoing call, automatically switching from one mode to another and then deactivating a communication means in favor of a telephone call, however, using the same microphone and speaker to make/receive call in essence deactivating that of a telephone in (see figs. 4-5 and cols. 6-7, col. 3). Detection of an incoming or outgoing call to trigger automatic switching can be done by a controller.

Miyama teaches a hearing aid device in (see figs. fig. 3 and disclosure) wherein a hearing aid user can use a hearing aid device for a bi-directional communication wherein in response to an incoming or outgoing call, automatic switching can be performed in addition of being able to manually switch into a different communication

Art Unit: 2643

mode as an option, signal processing can be done and then relayed to a user. Detection of an incoming or usage of a telephone to trigger automatic switching can be done by a communication department (see section 0030 of page 3-4, section 0040 of page 5, Detailed description).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Miyama or Mack into that of Anderson thus making it possible to provide bi-directional communication via automatic switching or manual switching since according to either secondary reference, one can be used in place of the other, saving user's time when automatic switching is used, and providing interconnection between various communication devices for hearing aid user's.

Regarding claims 102-104, 113 and 114, the combination teaches being to detect an incoming call or outgoing call.

Regarding claims 106, 108 and 109, the combination including Anderson teaches sound processing, volume control to adjust sound volume and so forth.

Regarding claims 116 and 125, The combination teaches manual or automatic switching.

Regarding claims 118-121, The combination teaches adjustment of volume parameters and a hearing aid which obviously process signals based on impairment of a user.

Regarding claims 123 and 128, see the explanation as set forth regarding claim 112.

Regarding claim 129, Anderson teaches a hearing aid in (see fig. 2) comprising of a microphone (see earpiece), a sound processor (24, 26 and cols. 5-6), a speaker (20) and switching mechanism (DPDT switch) that couples the microphone to the speaker in a hearing aid state and a second state that couples the microphone to the remotely located communication device (cell phone or in general phone) through the sound processor (26) to address efficiency in sound quality associated with the remotely located communication device and hearing impairment parameters of the user. Anderson teaches switching but fails to teach an automatic switch even though, not claimed.

Mack et al. teaches a communication system which can detect an incoming call or the making of an outgoing call, automatically switching from one mode to another and then deactivating a communication means in favor of a telephone call, however, using the same microphone and speaker to make/receive call in essence deactivating that of a telephone in (see figs. 4-5 and cols. 6-7, col. 3).

Miyama teaches a hearing aid device in (see figs. fig. 3 and disclosure) wherein a hearing aid user can use a hearing aid device for a bi-directional communication wherein in response to an incoming or outgoing call, automatic switching can be performed in addition of being able to manually switch into a different communication mode as an option, signal processing can done and then relayed to a user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mack or Miyama into that of Anderson thus making it possible to provide bi-directional communication using

Art Unit: 2643

automatic detection/switching saving user's time and providing interconnection between communication devices for efficiency.

Regarding claims 130-131, see the explanation as set forth above.

Regarding claim 132, The combination including Mack teaches a detector in the form of a controller and in view of Miyama, teaches a detection means (communication department, section 0040 of DETAILED DESCRIPTION).

Regarding claims 134-135, the combination including Anderson teaches being able to use parameters suitable for a user as part of signal processing and coupling a speaker to the telephone but deactivating the speaker of the telephone in (see figs and col. 6).

Regarding claim 138, The combination teaches the claimed limitation

Claims 110, 111, 119, 122, 124, 133, 135 and 137 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US Pat# 5,721,783) in view of Mack et al. (US Pat# 5,991,637) or Miyama (JP 10-290274) and further in view of Mangold.

Regarding claims 110-111, 119-122, 124, 133, 135 and 137, The combination fails to teach the claimed limitation in detail but Mangold teaches a hearing aid which can process signals based on environment and also based on hearing deficiency of a user in (see figs. and disclosure).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mangold into that of the

Art Unit: 2643

combination thus making it possible to adjust hearing loss based on suitable parameters associated with a user and in part by considering conditional factors.

Claims 105, 107, 114, 115, 117, 126, 127 and 136 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US Pat# 5,721,783) in view of Mack et al. (US Pat# 5,991,637) or Miyama (JP 10-290274) and further in view of Taenzer

Regarding claims 105, 107, 114, 115, 117, 126, 127 and 136, Mack et al. teaches a communication system which can detect an incoming call or the making of an outgoing call, automatically switching from one mode to another and then deactivating a communication means in favor of a telephone call, however, using the same microphone and speaker to make/receive call in essence deactivating that of a telephone in (see figs. 4-5 and cols. 6-7, col. 3).

Miyama teaches a hearing aid device in (see figs. fig. 3 and disclosure) wherein a hearing aid user can use a hearing aid device for a bi-directional communication wherein in response to an incoming or outgoing call, automatic switching can be performed in addition of being able to manually switch into a different communication mode as an option, signal processing can done and then relayed to a user.

the combination fails to teach a sleep mode for power conservation purposes.

Taenzer teaches a hearing aid device wherein a hearing aid device can conserve power by using an automatic means and a wake up mode in response to a normal use in (see cols. 9-10, col. 11 line 66-col. 12 line 5). Furthermore, according to Taenzer, a

Art Unit: 2643

hearing aid device can be placed in a sleep or awake state based on status of the hearing aid.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Taenzer into that of the combination thus making it possible to save power in (see col. 10 of Taenzer).

Claims 105, 107, 114, 115, 117, 126, 127 and 136 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US Pat# 5,721,783) in view of Mack et al. (US Pat# 5,991,637) or Miyama (JP 10-290274) and further in view of Hou

Regarding claims 105, 107, 114, 115, 117, 126, 127 and 136, the combination fails to teach a sleep mode and power conservation.

Hou teaches a power management for hearing aid device in (see figs. and disclosure) wherein a hearing aid device can be placed in a sleep mode as means of conserving power.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Hou into that of the combination thus making it possible to conserve power when the hearing device is not being used

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2643

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **REXFORD N BARNIE** whose telephone number is 571-272-7492. The examiner can normally be reached on M-F 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CURTIS KUNTZ can be reached on 571-272-7499. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRIMARY EXAMINER
REXFORD BARNIE

Application/Control Number: 09/739,242

Page 16

Art Unit: 2643

07/14/05

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